REMARKS

The Office Action dated December 29, 2004 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 15, 16 and 18 have been amended. No new matter has been added, and no new issues are raised which require further consideration and/or search. Claims 13-24 are submitted for consideration.

As a preliminary matter, the Office Action indicated that claim 20 contain allowable subject matter, and would be allowable if amended to be in independent form. Claim 20 is dependent on claims 13. Based on the arguments presented below, Applicant submits that claim 20 should be allowed.

Claims 15-18 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 15, 16 and 18 have been amended. Therefore, Applicants request that this rejection be withdrawn.

Claims 13-14, 19 and 23 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,631,116 to Eneroth. The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claims 13 and 23.

Claim 13, upon which claims 14-22 depend, recites a frame control method for controlling a transport frame used for transmitting a data unit via a dedicated channel between network elements of a communication system having different types of connections. The method includes the steps of encapsulating the data unit into the transport frame and selecting a frame type coding of the transport frame in accordance with a connection type of the dedicated channel. The method also includes the step of maintaining information on the frame types to be used for data units on a dedicated channel.

Claim 23, upon which claim 24 depends, recite a frame control apparatus for controlling a transport frame used for transmitting a data unit via a dedicated channel between network elements of a communication system having different types of connections. The apparatus includes means for encapsulating the data unit into the transport frame. The apparatus also includes means for selecting a frame type coding of the transport frame in accordance with a connection type of the dedicated channel. The apparatus further includes means for maintaining information on the frame types to be used for data units on the dedicated channel.

As outlined below, Applicants submit that the cited reference of Eneroth does not teach or suggest the elements of claims 13 and 23 and the dependent claims thereon.

Eneroth teaches a method for indicating the size of mini cells pertaining to an individual connection only when needed and for changing the size of the mini cell during an ongoing connection. According to Eneroth, an ATM cell includes a header and a

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payload which carries one or more mini cells, each of which includes a header and user data. Figure 1, Col. 3, lines 44-53. The mini cell header includes a circuit identifier, CID, for identifying the established connection/circuit, a payload type for identifying different payload types, a length indicator and a header integrity check field, HIC, for supervising the header integrity. Figs. 1-2 Col. 3, lines 44-64. A cell header reading device includes a shift register, a first counter, a latch register, a ROM, a second counter and a multiplexor. User data of the mini cells are shifted into the shift register. Clock signals are counted by the first counter which is used to extract a fixed size length field of a mini cell and write its data into the register. The information in the fixed length field is then used to as address to the ROM. The size of the user data from the ROM is read and set to the second counter which controls the multiplexor such that at the output, the user data will appear. Figures 15 and 17-39 and Col. 7, lines 7-25.

Applicants submit that Eneroth simply does not teach or suggest each of the elements of claims 13 and 23. Claims 13 and 23, in part, recite selecting a frame type coding of the transport frame in accordance with a connection type of the dedicated channel. According to page 3, lines 7-16 and page 9, lines 23-30 of the present application, the processing performed according to the "connection type" is situated at layer 1 of the OSI layer model. Thus, the present application effects a controlling of the control information between layers 1 and 2.

Furthermore as defined in a standardization 3GPP document, TR 21.905 version 3.0.0 (Release 1999), a 'transport block' is a basic data unit exchanged between layer 1

and the MAC layer (e.g. a MAC PDU) and a 'transport channel' is a channel offered by the physical layer to layer 2 for data transport. Different types of channels are defined by "how and with which characteristics data is transferred on the physical layer," for example, whether using dedicated or common physical channels. A 'common channel' is defined as a channel not dedicated to specific equipment. There exist a hierarchical relation in that 'a call' builds a logical association between two end terminals; 'connections' represent the actual links between single network elements; and those connection rely on respective (different) physical channels, thus representing 'connection types. As such, the connection type (on which the frame type coding of the present application depends) is hence related to the characteristics of the physical channel, i.e., of the dedicated channel, for example, in terms of bit rate used on the channel or the like. Applicants submit that the meaning of these terms is clearly understood as the common meaning to one of ordinary skill in the art since these terms were defined by a standardization body, 3GPP. Therefore, with regard to the usage of these standard terms, one of ordinary skill in the art would understand that the present application deals with the data link layer (layer 2) and the physical layer (layer 1).

The Office Action alleges that Eneroth refers to a dedicated channel (AAL2 Layer) between network elements. Upon review of Eneroth, there is no teaching or suggestion of a AAL2 layer. The only teaching of an AAL2 layer is found in claim 22 of the present application. Eneroth, on the other hand, refers to a method of indicating and/or changing a mini cell size. Eneroth also teaches changing the size of mini cells

belonging to an individual connection during an ongoing connection. According to Col. 3, lines 44ff. of Eneroth, an ATM cell includes a header and a payload which carries one or more mini cells. Each mini cell includes a header and user data, wherein the header includes a circuit identifier which identifies the established connection / circuit. Therefore, one could argue that a mini cell of Eneroth represents a data unit to be transmitted according to claims 13 and 23 of the present application.

Nevertheless, the claims of the present invention are not directed to amending data units, as taught in Eneroth. Rather claims 13 and 23 of the present invention recite selecting a frame type coding of the transport frame in accordance with a connection type of the dedicated channel. In view of the teachings of Eneroth, where an ATM cell includes various mini cells being identified by different CIDs, an ATM cell when transmitted does not relate to a transmission via a dedicated channel (as recited in claims 13 and 23) because the ATM cell includes packets belonging to different users/terminals, i.e., different established connections/circuits. Therefore, Eneroth fails to teach or suggest a frame control method for controlling a transport frame used for transmitting a data unit via a dedicated channel between network elements of a communication system having different types of connections as recited in claims 13 and 23. Furthermore, even if one assumes that an ATM cell would constitute a transport frame, then Eneroth would have to teach that the ATM cell header has to be selected and/or changed dependent on a connection type of a dedicated channel. However, Eneroth is completely silent about any modification effected to the ATM cell header. Additionally, Eneroth points out in Col.

17, lines 14ff, that ATM is a connection oriented technique that defines point-to-point connections. Therefore, any ATM cell carries data pertaining to different users/terminals which are therefore transmitted via a common channel and not via a dedicated channel. The Office Action states that selecting a mini cell size based on a connection type, such as voice or data as taught in Eneroth, corresponds to selecting a frame type coding of the transport frame in accordance with a connection type of the dedicated channel as recited in clams 13 and 23. Applicants submit that the transport frame of claims 13 and 23 simply does not correspond to the mini cell of Eneroth. Moreover, voice or data do not distinguish a connection type. As defined above, a connection represents an actual link between single network elements and those connections rely on respective different physical channels, thus representing connection types. For a specific connection, different connection types in terms of an underlying physical channel may be used and different data (for example voice/speech or data/non-speech) transmitted via a connection may be transmitted using a same connection type since physical resources "do not care" about the contents of the information that they carry. Based on the reasons outlined above, Applicants submit that Eneroth does not teach or suggest at least selecting a frame type coding of the transport frame in accordance with a connection type of the dedicated channel as recited in claims 13 and 23. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §102(e) should be withdrawn because Eneroth does not teach or suggest each feature of claims 13 and 23 and hence, dependent claims 14 and 19 thereon.

Claim 15 was rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Patent 6,631,116 to Eneroth in view of U.S. Patent 6,414,967 to Van Grinven. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claim 13, upon which claim 15 is dependent.

Van Grinven fails to cure the deficiencies in Eneroth as Van Grinven does not teach or even suggest at least selecting a frame type coding of the transport frame in accordance with a connection type of the dedicated channel as recited in claim 13. Instead, Van Grinven is primarily directed to a transmission system with a flexible frame structure and enables a transport of data in a format different from a sequence of ATM cells. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Eneroth no Van Grinven, whether taken singly or combined, teaches or suggests each feature of claim 13 and hence, dependent claim 15 thereon.

Claims 21-22 and 24 were rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Patent 6,631,116 to Eneroth in view of U.S. Patent 6,347,112 to Widegren. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claims 13 and 23, upon which claims 21-22 and 24 are dependent.
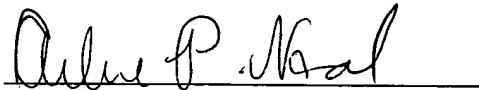
Widegren also fails to cure the deficiencies in Eneroth as Widegren also does not teach or even suggest selecting a frame type coding of the transport frame in accordance with a connection type of the dedicated channel as recited in claim 13. Instead, Widegren is directed to flexible radio access and resource allocation in a UMTS system. In this regard, UTRAN flexibly maps or allocates the radio access bearer to physical transport resources, and, if one or more parameters change during the life of the connection, the connection may be switched to a more appropriate channel type. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Eneroth no Widegren, whether taken singly or combined, teaches or suggests each feature of claims 13 and 23 and hence, dependent claims 21-22 and 24 thereon.

As noted previously, claims 13-24 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 13-24 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Arlene P. Neal
Registration No. 51,091

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

APN:mm